

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A Project report on

**AUTOMATED TEST SOLUTION FOR PCB ASSEMBLY
USING MICROCONTROLLER AT89S52**

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Submitted in partial fulfillment of the requirements for the award of the degree of
Bachelor of Engineering
in
Electronics and Communication

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ABSTRACT

In today's world the use of PCB board has become inevitable. PCB's find usage from a small toy to large machines. A printed circuit board is made up of a large number of components which are interconnected. All manufacturers face difficulties in testing of PCB due to the presence of various junctions in it.

This project is designed to provide a simple PCB test solution. The testing system designed measures the voltage of the critical test points present in the PCB board under test. The measured voltage value is compared with a reference voltage range. If the measured value is within the range then a pass message is displayed in PC. If the measured voltage value lies outside the range then a fail message is displayed in PC. The details of operator, board and result of the testing process is stored in PC as a note pad file. The entire testing process is controlled by microcontroller AT89S52. PC display is facilitated by LabVIEW software.

The proposed project has a simple design and the overall speed of the process is also high. The current system is designed to test 15 test points of a PCB board at a time. This system can be employed to test any PCB with a 15V range.